REMARKS

Reconsideration of the instant application is respectfully requested. The present amendment is responsive to the Office Action of December 28, 2006, in which claims 1-30 remain pending in the application. Of those, claims 1-30 have now been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. In addition, claims 1-30 remain rejected 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. For the following reasons, however, it is respectfully submitted that the application is now in condition for allowance.

Rejections under 35 U.S.C. §112, first paragraph

Independent claim 1 has been amended as set forth above to more particularly point out how one skilled in the art is to determine whether a determined temperature ring flame temperature operational boundary represents either a maximum or a minimum ring flame temperature to be permitted by the controller. Specifically, claim 1 now provides in pertinent part:

"...***upwardly*** adjusting a ring flame temperature at said first burner dome in said gas turbine engine so as to determine a maximum ring flame temperature operational boundary for said first burner dome ***upon determination of one or more of: lean blowout conditions, exceeded predefined liner and dome metal temperature limits, combustion dynamic pressures, and emissions limits***, with the determined maximum ring flame temperature operational boundary representing a maximum ring flame temperature to be permitted by the controller...

...***downwardly*** adjusting said ring flame temperature at said first burner dome in said gas turbine engine so as to determine a minimum ring flame temperature operational boundary for said first burner dome upon determination of one or more of: lean blowout conditions, exceeded predefined liner and dome metal temperature limits, combustion dynamic pressures, and emissions limits, the determined minimum ring flame temperature operational boundary

representing a minimum ring flame temperature to be permitted by the controller..." (Emphasis added)

Support for the above amendment is found at least in paragraphs [0020], [0024], [0029] and [0030] of the specification, which provide in pertinent part:

"These operational boundaries also include maximum and minimum ring flame temperature limits 66, 68 for each operating mode 52, 54, 56, 58, 60, which are established by lean blowout, liner/dome metal temperatures, combustion dynamic (acoustic) pressures, and emissions limits." [0020]

"The individual or ring dome flame temperature is then adjusted to determine maximum and minimum ring flame temperature boundary limits." [0024]

"The maximum ring flame temperature boundary is determined by a maximum temperature boundary procedure, which causes an increase in the temperature of the combustor flame and analyzes data from sensors 84-92 to detect changes in dynamic pressure, blowout indicators, ring flame temperature limits and emissions limits caused by this increase. The procedure then determines if the maximum ring flame temperature boundary has been reached based on data from the various sensors." [0029]

"The minimum temperature boundary procedure causes a decrease in the ring flame temperature in the subject dome and analyzes data from sensors 84-92 to detect changes in dynamic pressure, blowout indicators, ring flame temperature limits, and emissions to determine if the minimum ring flame temperature boundary has been reached." [0030]

Accordingly, the Applicants respectfully submit that the claims, as now amended, provide one skilled in the art with both knowledge and criteria as to how to determine the minimum/maximum temperatures. Given this, the Applicants further respectfully submit that the additional claim language also enables the definition of a nominal ring flame temperature by calculation from the minimum and maximum ring flame temperatures, since the claim enables one skilled in the art to determine the minimum/maximum flame temperatures in the first place.

As such, the Applicants respectfully submit that the §112, first paragraph rejections of claim 1-30 have been overcome with the instant amendment, and request withdrawal of the same.

Rejections under 35 U.S.C. §112, second paragraph

With regard to the rejections under 35 U.S.C. §112, second paragraph, the Examiner maintains the position that the terms "maximum," "minimum," and "nominal" as related to "ring flame temperature boundary," are indefinite. However, the Applicants respectfully submit that the present amendment also overcomes the §112, second paragraph rejections.

For example, a maximum ring flame temperature operational boundary is established once the ring flame temperature is adjusted to a high enough value such that a defined condition(s) is detected (e.g., lean blowout conditions, exceeded predefined liner and dome metal temperature limits, combustion dynamic pressures, and emissions limits). Stated another way, after a certain upper temperature threshold for ring flame temperature is reached, one or more undesirable combustor conditions will be detected. Therefore, it becomes known that the ring flame temperature should not exceed this detected maximum operational boundary.

Similarly, a minimum ring flame temperature operational boundary is established once the ring flame temperature is adjusted to a low enough value such that a defined condition(s) is detected (e.g., lean blowout conditions, exceeded predefined liner and dome metal temperature limits, combustion dynamic pressures, and emissions limits). Stated another way, after a certain lower temperature threshold for ring flame temperature is reached, one or more undesirable combustor conditions will be detected. Therefore, it becomes known that the ring flame temperature should not drop below this detected minimum operational boundary.

Once maximum/minimum boundaries are established, an operating window encompassing a range of allowable ring flame temperature can be determined and, thus, a "nominal" (desired) temperature value may be determined as well.

As to the enforcement of maximum/minimum boundaries, the Examiner further indicates that "Applicant's disclosure does not teach how the claimed computer will permit the maximum

ring flame temperature operational boundary." The Applicants direct the Examiner's attention to FIG. 1 and to paragraph [0021] of the specification, which provides:

"The combustor's ***maximum and minimum ring flame temperatures*** 66, 68, corresponding operating mode 52, 54, 56, 58, 60, and other operational data are ***stored as control schedules 80 in a memory device 82 for use by the combustor's controller 11***. During operation of the combustor 10, the controller 11 monitors and corrects fuel flow and distribution and intake airflow (via compressor bleed) using these pre-programmed control schedules 80. ***The control schedules 80 are configured to ensure that the controller steers the engine away from its operational boundaries***. Memory device 82 is any form of non-volatile memory such as an EPROM (Erasable Programmable Read Only Memory) chip, a disk drive, or the like." (Emphasis added)

Therefore, as plainly indicated in the disclosure, once the operational boundaries are determined (e.g., through the claimed methodology), they are stored as control schedules 80 within a memory device 82 in communication with the combustion controller 11.

Accordingly, the Applicants respectfully submit that the present amendment to claim 1 also overcomes each of the outstanding rejections to the pending claims based on 35 U.S.C. §112, second paragraph.

For the above stated reasons, it is respectfully submitted that the present application is now in condition for allowance. No new matter has been entered and no additional fees are believed to be required. However, if any fees are due with respect to this Response, please charge them to Deposit Account No. 06-1130 maintained by Applicants' Attorneys. If the Examiner has any queries regarding the presently submitted response, the Applicants' attorney respectfully requests the courtesy of a telephone conference to discuss the same.

Respectfully submitted,
RICHARD HOOK, ET AL.

CANTOR COLBURN LLP
Applicants' Attorneys

By _____
Sean F. Sullivan
Registration No. 38,328
Customer No. 23413

Date: March 21, 2007
Address: 55 Griffin Road South, Bloomfield, CT 06002
Telephone: (860) 286-2929